ThinkPad T450s Platform Specifications

Processor

5th Generation Intel® Core™ i5 / i7 Processor

Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500
i5-5300U			2.3 GHz	2.9 GHz	3MB		
i7-5600U			2.6 GHz	3.2 GHz	4MB		

Graphics

Intel HD Graphics 5500 in processor only, or
Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays;
Max resolution: 3840x2160@60Hz (DP via mDP cable); 1920x1200@60Hz (VGA)

Chipset

Intel SoC (System on Chip) platform

Memory

12GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket

Display

Some: 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio
Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS

Multi-touch *(opt)*

Capacitive-type multi-touch, supports 10-finger gesture, 264 nits

Storage

Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™
Some: SSHD with 8GB NAND flash memory

M.2 SSD *(opt)*

Single-sided M.2 SSD, via M.2 card slot

Optical

None

Ethernet

Non-vPro model: Intel Ethernet Connection I218-V (Clarkville)
vPro model: Intel Ethernet Connection I218-LM (Clarkville)

Bluetooth™

Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter

WLAN[4]

One of the following, configurable by model:

- 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card
- 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card
- 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card
- 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card

WWAN *(optional)*

One of the following, configurable by model:

- Wireless WAN upgradable
- Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card
- Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card

SIM card *(opt)*

AT&T® or Verizon® LTE (4G), contract required with service provider

Dimensions[3]

14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm

Weight[2]

Models	*No + 3-cell*	*3-cell + 3-cell*	*3-cell + 6-cell*
Integrated Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Integrated Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg
Discrete Non-touch	3.27 lb / 1.48 kg	3.51 lb / 1.59 kg	3.91 lb / 1.77 kg
Discrete Multi-touch	3.80 lb / 1.72 kg	4.03 lb / 1.83 kg	4.43 lb / 2.01 kg

Case material

Display cover: Carbon-Fiber Reinforced Plastic;
Bottom: Magnesium/Aluminum

Smart card reader

Optional: Smart card reader

Multicard reader

4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports

Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)

Camera

HD720p resolution, low light sensitive, fixed focus

Audio support

HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Keyboard

6-row, spill-resistant, multimedia Fn keys, optional LED backlight

UltraNav™

TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

ThinkEngine

Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures

vPro *(optional)*

Intel vPro Technology

Fingerprint reader

Optional: Fingerprint reader on the keyboard bezel, swipe sensor

Internal battery

Optional: Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*

External battery

Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*

Max battery life[10]

Models	*3-cell + 3-cell*	*3-cell + 6-cell 48Wh*	*3-cell + 6-cell 72Wh*
Integrated	10.16 hr	14.9 hr	19.9 hr
Discrete	10.5 hr	15.4 hr	20.6 hr

AC adapter

45W AC adapter, 65W Slim AC adapter, or 65W AC adapter

Preload

Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit

- Lenovo Solution Center
- Lenovo SHAREit
- ThinkVantage Product Recovery
- Rescue and Recovery™
- ThinkVantage System Update
- PC Device Stage
- Adobe® Reader®
- Evernote®
- Skype™
- Maxthon Cloud Browser
- Microsoft® Office preloaded; purchase a product key to activate
- Norton™ Internet Security (30 days of virus definitions)

Some: Windows 8.1 64-bit
Some: Windows 8.1 Pro 64-bit

- Lenovo Solution Center
- Lenovo SHAREit
- Lenovo Companion
- ThinkVantage System Update
- PC Device Stage
- Weather Channel
- Evernote
- Maxthon Cloud Browser
- Bing Translator
- Norton Studio
- Microsoft Office preloaded; purchase a product key to activate
- Norton Internet Security (30 days of virus definitions)

Limited warranty[12]

One of the following, configurable by model:

- 1-year depot repair service
- 3-year/1-yr battery depot repair service
- 3-year/1-yr battery limited onsite service[24]
- 3-year/1-yr battery limited onsite service, IWS (International Warranty Service[17])

Environment

EPEAT™ Gold (US) or EPEAT Silver (WE);
ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant